EL969716660US

Pyrazole Derivatives

This application claims ~~priority from United Kingdom application number 0223232.0, filed October 7, 2002 and also claims~~ the benefit of U.S. Provisional Application number 60/432,859, filed December 11, 2002, and incorporates each application by reference in its entirety.

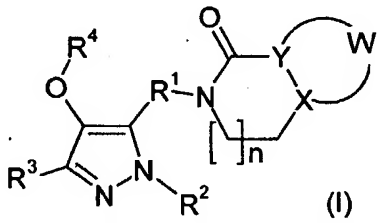
Background of the Invention

This invention relates to pyrazole derivatives, to their use in medicine, to compositions containing them, to processes for their preparation and to intermediates used in such processes.

Reverse transcriptase is implicated in the infectious lifecycle of Human Immunodeficiency Virus (HIV). Compounds which interfere with the function of this enzyme have shown utility in the treatment of conditions caused by HIV and genetically related retroviruses, such as Acquired Immune Deficiency Syndrome (AIDS). There is a constant need to provide new and better modulators, especially inhibitors, of HIV reverse transcriptase, since the virus is able to mutate, becoming resistant to the effects of known modulators.

Antiviral activity is ascribed to a class of N(hydroxyethyl)pyrazole derivatives in US patent number 3,303,200. A number of pyrazoles are disclosed as reverse transcriptase inhibitors, including: a class of N-phenylpyrazoles (*J. Med. Chem.*, 2000, **43**, 1034); a class of C and S linked aryl pyrazoles (WO02/04424); and a class of O and S linked aryl pyrazoles, the O and S aryl link being adjacent to the nitrogen atom (WO02/30907).

According to the present invention there is provided a compound of formula (I)



(I)

or a pharmaceutically acceptable salt, solvate or derivative thereof, wherein:

W-X-Y defines a five or six-membered partially saturated or aromatic ring containing 0 to 3 nitrogen atoms wherein X is CH or N and Y is CH or, when X is CH, may also be N; said ring being optionally substituted by halo, oxo, -CN, $-COR^5$, $-CONR^5R^5$, $-SO_2NR^5R^5$, $-NR^5SO_2R^5$, $-OR^5$, OR^{11}, $-NR^5R^5$, $-(C_1\text{-}C_6$ alkylene$)\text{-}NR^5R^5$, R^7, R^{11}, or CF_3;

R^1 is $C_1\text{-}C_6$ alkylene;

R^2 is H, $C_1\text{-}C_6$ alkyl, $C_3\text{-}C_6$ alkenyl, $C_3\text{-}C_6$ alkynyl, $C_3\text{-}C_7$ cycloalkyl, $C_3\text{-}C_7$ cycloalkenyl, phenyl, benzyl, R^8 or R^9, said $C_1\text{-}C_6$ alkyl, $C_3\text{-}C_7$ cycloalkyl, phenyl and benzyl being optionally substituted by halo, $-OR^5$, $-OR^{10}$, -CN, $-CO_2R^7$, $-OCONR^5R^5$, $-CONR^5R^5$, $-C(=NR^5)NR^5OR^5$, -